

Claims

1. Multi-stand photogravure machine with a first (10) and at least one additional printing unit (12a; 12b) each containing an impression roller (32; 52) and a driven print cylinder (34, 54), characterized in that, in the at least one additional
5 printing unit (12a; 12b), the impression roller (52) is provided with a regulated drive (56) and is in contact with the printable material (16), so that it can sustain a web velocity of the printable material (16) varying from the circumferential speed of the contacting print cylinder (54).

2. Multi-stand photogravure machine of claim 1, characterized in that,
10 in the at least one additional printing unit (12a), the regulated drive (56) of the impression roller (52) contains a metering roll (48), which is disposed adjacent to the course of the web and measures the web tension.

3. Multi-stand photogravure machine of claim 1 or 2, characterized in that each driven impression roller (52) has a drive, in which an acceleration or
15 deceleration can be set with respect to another impression roller (32).

4. Multi-stand photogravure machine of one of the preceding claims, characterized in that the print cylinder (54) of the at least one additional printing unit (12a; 12b) has a drive, in which an acceleration or deceleration with respect to the print cylinder (34) of the first printing unit (10) can be set.

20 5. Photogravure process for a multi-stand photogravure machine with a first (10) and at least one additional printing unit (12a; 12b), each containing an impression roller (32, 52) and a driven print cylinder (34; 54), characterized in that the impression roller (52) of the at least one additional printing unit (12a; 12b) is actively driven and that, by means of the drive of the impression roller (52) of the at
25 least one additional printing unit (12a, 12b), the web tension of a web (16) is regulated.

6. Photogravure process of claim 5, characterized in that, upon the start-up of the photogravure machine, when the print cylinders (34; 54) are brought to a uniform, regulated rotational speed, the web velocity is set by a draw-in mechanism (14) and the rotational speed of each driven impression roller (32, 52) is so regulated
5 that a uniform web tension results in all printing units (10, 12a, 12b).

7. Photogravure process of claim 5 or 6, characterized in that, upon start-up, the impression roller (32) of the printing unit (10) adjacent to one draw-in mechanism (14) sets the web velocity, and the rotational speed of a draw-in mechanism (14) and impression roller (52) of the at least one additional printing unit
10 (12a; 12b) are regulated, so that a uniform web tension results.

8. Photogravure process of one of the claims 5 to 7, characterized in that, during start-up, the rotational speed of the print cylinder (54) in the at least one additional printing unit (12a, 12b) is regulated by means of an optical sensor (58) so that register accuracy is achieved.

15 9. Photogravure process of one of the claims 5 to 8, characterized in that, during the run time, the rotational speeds of the impression rollers (32, 52) attained in the start-up are sustained and a reaction is made to departures from the uniform web tension with brief variations of a set speed of a driven impression roller (52) from the rotational speed reached during start-up.

20 10. Photogravure process of one of the claims 5 to 9, characterized in that, during run time, the speeds of the print cylinders (34, 54) reached during start-up are sustained and a reaction is made to register errors with brief departures of a set speed from the speed reached during start-up.

25 11. Photogravure process of claim 9, characterized in that, to produce the brief departure of the set speed of a driven impression roller (52), an acceleration or deceleration with respect to another impression roller (32) is established at the drive of the impression roller (52).

12. Photogravure method of claim 10, characterized in that, to produce the brief departure of the set speed of a print cylinder (54), an acceleration or deceleration, with respect to another print cylinder (34), is established at the drive of the print cylinder (54).